

*No Bond*

METHOD OF OPERATION  
TRUNK CIRCUIT

Two Way - Arranged For Cross-Connection - To miscellaneous Answering Jack And Lamp  
At - Special "A" Board - Full Mechanical Switching System.

GENERAL DESCRIPTION

1. This two-way trunk circuit is used to handle traffic between a special "A" position and a Stromberg-Carlson exchange. It is also used for completing calls over the manual tandem positions to a Stromberg-Carlson exchange.
2. On an incoming call from Stromberg-Carlson exchange the line lamp lights at the special A board. When the plug of an answering cord is inserted in the associated answering jack, the line lamp is extinguished and the talking circuit is closed.
3. When the plug of a calling cord or a manual tandem cord is inserted in a multiple jack at the special A board, the line lamp lights at the Stromberg-Carlson exchange.
4. Standard supervision is given both operators by reversing the tip and ring circuits between the two ends.

DETAILED DESCRIPTION

OPERATION

5. On an incoming call from a Stromberg-Carlson exchange the B relay operates, placing battery on the sleeve lead of the multiple jacks to provide a busy test and lighting the line lamp at the A board under control of the CI-1 relay. When the plug of an answering cord is inserted in the jack associated with the lighted line lamp the CO relay operates, in turn operating the C-1 relay. The C-1 relay operated releases the B relay and operates the CI-1 relay, thereby extinguishing the line lamp. It also closes a circuit through the S relay which operates, in turn operating the S-1 relay. The operation of the S-1 relay reverses the polarity of the battery to the tip and ring of the answering cord through the windings of the A relay to prevent the supervisory lamp at the special "A" board from lighting, and opens the circuit through the audible ringing signal lead. When the connection is taken down at the Stromberg-Carlson exchange, the S relay releases, releasing the S-1 relay which connects battery to the ring and ground to the tip of the answering cord through the windings of the A relay, lighting the supervisory lamp at the "A" board as a disconnect signal whereupon the plug of the cord is removed from the answering jack at the special A board, releasing all operated relays and restoring the circuit to normal.

6. In case disconnection originates at the special "A" board, the release of the CO relay releases the CI relay, disconnecting battery and ground from the ring and tip of the line respectively and thereby lighting the supervisory lamp at the Stromberg-Carlson board as a disconnect signal.

7. When the plug of a special A calling cord or a manual tandem cord is inserted in a multiple jack at the special A board, the calling cord supervisory lamp lights and the A relay operates, operating the CI relay. The operation of the CI relay closes the tip and ring through the repeating coil, lighting the line lamp at the Stromberg-Carlson exchange, and operates the CI-1 relay which connects the audible ringing signal lead to the tip of the line sending a ringing tone back to the calling subscriber. When the call is answered at the Stromberg-Carlson exchange the line lamp is extinguished and the S relay operates, operating the S-1 relay which opens the circuit through the audible ringing signal lead, and reverses the polarity of the battery flowing to the calling cord through the windings of the A relay, extinguishing the cord supervisory lamp. When the connection is taken down at the Stromberg-Carlson exchange the supervisory lamp lights as a disconnect signal, whereupon the plug is removed from the multiple jack at the Special A board, restoring the circuit to normal. If the plug of the cord is withdrawn first at the special "A" board the A relay releases, in turn releasing the CI relay which causes the supervisory lamp at the Stromberg-Carlson board to light as a disconnect signal.

CIRCUIT REQUIREMENTS

	<u>OPERATE</u>	<u>NON-OPERATE</u>	<u>RELEASE</u>
B1 S	After a soak of approx- imately .3 Amp. Test .019 Amp. Re-Adj. .016 Amp.		After a soak of approximately .3 Amp. Test .003 Amp. Re-Adj. .005 Amp.
B10 C.O.	Test .023 Amp. Re-Adj. .022 Amp.		Test .0019 Amp. Re-Adj. .002 Amp.
B71 A	Test .007 Amp. Re-Adj. .002 Amp.		Test .0006 Amp. Re-Adj. .0006 Amp.
E216 CI	Test .029 Amp. Re-Adj. .021 Amp.	Test .014 Amp. Re-Adj. .015 Amp.	
Spl.B relay per D-22637 B	Test .0015 Amp. Re-Adj. .0014 Amp.		Test .0007 Amp. Re-Adj. .0007 Amp.
Spl.E per D-14961 S-1	Test .040 Amp. Re-Adj. .025 Amp.		Test .0047 Amp. Re-Adj. .005 Amp.
#178-AG CI-1	Test .045 Amp. Re-Adj. .030 Amp.		Test .0019 Amp. Re-Adj. .002 Amp.

ENG.--HBH-RV.  
7/16/21.

CHK'D.--EGL.

APPROVED C.L. SLUYTER, G.M.L.